

## SEAC4RS ER-2 Flight Report August 14, 2013

**Takeoff: 1536 UT, landing: 2136 UT, duration: 6 hours**

**Pilot: Dean Neeley**

### Summary:

The primary objectives of the flight were sampling across the gradients of the North American Monsoon anticyclone and remote sensing of biomass-burning smoke. The aircraft headed west across Texas then northeast across Oklahoma while executing vertical profiles. The first two profiles extended down to 43 kft with lower descents prevented by air traffic and convective clouds. The aircraft descended to near the tops of a decaying Mesoscale Convective System over central Texas. Two more profiles down to 45 kft were made en route to southeast Kansas. At this point, the ER-2 initiated a rosette pattern coordinated with the DC-8 for remote sensing of an optically thin smoke plume over the Mingo Aeronet site. Clouds were absent in the region. The forecast called for severe weather at Ellington Field around landing time, so the decision was made to return to base after the second leg of the rosette. The aircraft flew at a constant altitude of 61 kft on the return leg.

Real-time and quick-look data indicated that all instruments worked well.

